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Part II

Text for Students

on

CARE AND OPERATION OF TRUCKS

for

C.C.C. Training Course

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(STUDENT'S COPY)

CARE AND OPERATION OF MOTOR TRUCKS

PURPOSE AND INTRODUCTION

Lesson No. 1

The purpose of this course is to give the student a general knowledge of the care and operation of trucks, a knowledge of safety regulations, and to better prepare him to fill a position when he returns to civil life. Enrollees must realize the seriousness of their responsibility while driving trucks, especially while hauling men.

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This course is not to be mistaken for a complete course on Automotive Mechanics, since that will be taken up as a course within itself upon the completion of this basic course. This course has been purposely simplified so that it may be easily understood. It will form a sound basis for the enrollee who has some natural ability in handling motorized equipment, and who cares to go on with more advanced work in this field.

The materials which make up the lessons have been taken from numerous service manuals published by the manufacturers of the automotive equipment being used by the Soil Conservation Service. The course is not intended to prepare the student to operate any one type or make of truck, but to give him a general knowledge of the care and operation of all trucks. Special stress, however, will be placed on instruction in the care and operation of the particular trucks used in camp.

So far as seems practical, the lessons will be presented by the method of question and answer. Each question will be fully discussed by the whole class before the next question is taken up. About ten minutes will be given at the beginning of each class for a review of what was learned in the previous lesson.

At the first meeting, the instructor will explain in more detail the purpose and introduction of this course. He will designate the meeting place and the hour of meeting.



LESSON II

DRIVING RULES AND SAFETY

This lesson will take up the more important sections of the "Emergency Conservation Work Safety Regulations," as applied to trucks and cars, but in no way does it take the place of the regular safety meetings held in the camps, nor is it intended to contradict these regulations in any way.

This lesson is to familiarize the enrollee with the above mentioned regulations, and to help prepare him to pass a required drivers test.

1. Q. What are driving courtesies?

A. 1. At all times observe the rights of pedestrians.

2. Always slow down, and if necessary, come to a complete stop when meeting another car on a narrow or muddy road.

3. Drivers must not expect children to continue to proceed in any particular direction. In approaching schools or other places where children are on the highway, the truck shall not be operated at a greater rate of speed than will permit prompt stopping to avoid personal injury to any child. Sound horn frequently while children are within the right of way.

4. Drivers must respect the rights of a laborer whose duties require him to be upon the highway. While such laborer is bound to exercise care, he also is permitted to carry on his work.

5. In case of an accident, regardless of whether you are involved or not, stop and render first aid or give such assistance as is possible.

6. Extend the same favors and courtesies to other motorists as you would expect from them.

7. Do not be a fool, or what is referred to as a "road hog."

2. Q. What side of the road shall be driven on?

A. At all times drive on the right hand side of the road, and under no circumstance approach a curve or hilltop on the wrong side of the road.

3. Q. What action should be taken when necessary to park a truck or make repairs while on the road?

A. 1. If possible, drive truck completely off the road.

2. If it is impossible to drive truck completely off the road, park the car as far to the right hand side of the road as is safe. In the daytime, set red flags approximately three hundred feet to the front and rear of truck. At night, set flares approximately three hundred feet to front and rear of truck, and another flare by the left side of the truck.

4. Q. How should the truck be driven back on the road?

A. The driver should look in both directions on the road and satisfy himself that there is no danger from approaching cars.

5. Q. What are the arm signals when stopping or changing directions?

A. 1. To turn to the left, get in the traffic lane next to the center of the street, and extend hand and arm horizontally (straight out) from and beyond the left side of the vehicle.

2. Keep to the curb when turning to the right, and extend hand and arm upward and beyond the left side of the vehicle.

3. To stop suddenly or decrease speed, extend hand and arm downward from and beyond left side of vehicle.

4. The signal to the right or left shall be given continuously during the last fifty feet before turning.

6. Q. What precaution should be taken when backing a truck?

A. 1. If a swamper is on the truck, he should get out and be in a position to give the driver proper signals.

2. If the driver is alone, he should get out of the cab and satisfy himself as to the clearance behind the truck.

3. Sound horn if necessary.

7. Q. What are some things to be considered when turning a truck around on the road?

A. 1. Never attempt to turn a truck on a narrow or blind road. If this is absolutely necessary, send flagmen to both front and rear of the truck.

2. The driver should make sure that the road is clear of oncoming cars in both directions.

8. Q. What are some important points to remember when passing another vehicle on the highway?

A. 1. In passing another car or truck going in the same direction, never attempt to pass on a curve or a hill.

2. If another car is approaching from the opposite direction, do not attempt to pass until the approaching vehicle has gone by.

3. Never attempt to pass another vehicle while in heavy traffic.

4. The striking of any standing vehicle or other stationary object in the road while passing the same is inexcusable, regardless of whether such vehicle or obstacle is legally in such position or not. Drivers must first be sure that the vehicle or obstacle can be passed in safety, without damage or injury to the truck or other property.

5. Never pass another vehicle at a side road or street intersection. Travel a safe distance behind when following another vehicle. Watch for signals from the driver of the vehicle in front of you. The driver should start the "act of passing" forty or fifty feet behind the vehicle to be passed so there will be plenty of space to turn back into the right-hand lane if an oncoming vehicle should appear.

9. Q. What are proper driving speeds?

A. In the CCC, there are maximum speeds of 25 miles while hauling men, and 35 miles an hour while hauling freight, but road and weather conditions must always be considered in setting the correct speed. Such factors as slippery and

icy roads, curves, hills, intersections, bright sun, glaring lights, and load conditions should govern the driving speed.

10. Q. What are the load capacities of a truck?

A. 1. At no time load a truck with more than its rated capacity.

2. In CCC Camps, the following load limits have been set up for hauling men:

1. For dump trucks, body load- 15 men.
(Not used for hauling men in Soil Conservation Service, Region 8.)
2. Stake bodies, 157-inch wheel base- 30 men.
3. Stake bodies, 131-inch wheel base- 25 men.
4. Pickups- 6 men.

3. At no time, except in the emergency of hauling an injured man, should more than two persons ride in the cab of the truck.

11. Q. When should lights be dimmed?

A. 1. In most states, the law requires the driver to dim his lights or depress the beam when approaching another car after dark.

2. Regardless of whether or not the other driver extends the courtesy of dimming his lights, a driver should dim his own lights for the safety of all persons concerned, and to enable better observation of the road. Always dim your lights in a fog.

12. Q. What are the penalties for driving while intoxicated?

A. 1. In New Mexico: Not less than 30 days nor more than one year in jail, or a fine of not less than \$100 nor more than \$1,000.

In Arizona: Not less than 30 days nor more than 90 days in jail, or a fine of not less than \$200 nor more than \$5,000.

In Utah: Not less than 30 days nor more than six months in jail, or a fine of not less than \$100 nor more than \$299, or both fine and imprisonment.

In Colorado: Not more than one year in jail or not more than \$1,000, or both fine and imprisonment.

In CCC: Immediate discharge.

A man is considered intoxicated when he shows the effects of liquor, no matter how slight.

13. Q. Why is the condition of windows and windowshields important?

A. 1. A small amount of dust or dirt on the windshield while driving into the sun, or meeting a car at night, will so impair the vision that the driver cannot see the road.

2. Windows, rear-view mirrors and windshields should be cleaned daily and more often, if necessary.

14. Q. What are the required safety appliances for trucks?

A. The driver of a truck should make a personal inspection of his truck daily to see that the following safety devices are on the truck and in working order, and if repairs are necessary, to make a report to the designated authority:

(1) Governors set not to exceed 35 miles per hour on trucks, and 45 miles per hour on pickups.

(2) All trucks that are used on the road at night shall be equipped with clearance lights on the body as required by state law.

(3) All trucks and cars operated in New Mexico, regardless of size and type, shall carry a rear reflector.

(4) All trucks operated on the highway at night shall be equipped with a kit of three flares and flags. Flares are to be kept full of oil at all times.

(5) Load flags are to be displayed on all over-length loads, and lights on same at night.

(6) First-aid kits shall be kept in all trucks and pickups.

(7) Driving rules shall be posted in each truck.

(8) Accident Report, Form #26, shall be in each car and truck.

(9) The headlights, both bright and dim, tail lights, front axle, steering mechanism, and brakes shall be tested daily and any deficiencies reported.

15. Q. What is the driver's duty in case of accident?

A. 1. In case of an accident, regardless of how trivial or how serious, the driver shall fill out completely the Accident Report, Form #26. He shall make notes of every detail that might be brought up concerning the case.

2. He shall secure the names and addresses of all important witnesses.

3. In case of a serious accident, he shall immediately report it to the project superintendent or to the office of the District ECW Administrator, who will send a member of his staff to investigate the accident.

4. Under no circumstances should the driver agree to repair the other car or truck. He should explain to the other party that the accident will be thoroughly investigated, and that the proper authority will agree on the settlement, if any is due.

5. He should check all safety devices and establish the fact that they are in working condition.

16. Q. What are the responsibilities of the truck driver?

A. 1. Under ordinary circumstances, there will be a foreman or a rated man in charge of the truck, but when a foreman or a rated man is not present, the truck driver shall assume this responsibility.

2. He shall be sure that seats are in the truck and that all men are seated. He shall inspect the side gates and tail gates to make sure that they are securely fastened before the truck is put into motion.

3. ECW regulations prohibit such dangerous practices as standing up in a truck, hanging feet over the side of the truck, or riding on running board or fender. Therefore, when the driver is in charge of the trucks, he should never hesitate to use his authority to enforce these regulations.

17. Q. What are motor vehicle operators permits?

A. 1. A permit is the driver's written authority to operate a truck.

2. Every truck driver shall be required to pass a drivers test before he is given an operator's permit. He should carry this permit with him at all times while driving.

3. This requirement is mandatory and the project superintendent must be absolutely sure that the man is qualified before the permit is issued.

Bumps and Chugholes

Trucks must be eased over bumps and chugholes. Pools of water sometimes conceal deep holes which might damage the truck or cause an accident. Always slow down. Particular care should be taken in crossing dry arroyos in rainy seasons. The driver shall not drive into any running stream of water without first determining the depth of the water and considering the safety of crossing.

Shutting off Motor

The motor of any truck should not be allowed to remain running when the truck is not in motion, except when the driver remains in the driver's seat. Before leaving his truck, the driver shall always make certain that the brakes are effectively set and the truck is in gear.

Stopping on Inclines

No truck shall be stopped on any incline except when absolutely necessary. When it becomes necessary to stop on an incline, set all brakes and place the truck in gear. When

so stopped on an incline, the driver shall not leave the truck without securely blocking the wheels and making certain that the truck will not roll or otherwise move from the position in which it is left. Cut wheels so that the truck would roll into the bank in case it slipped.

Watch the Road

Perhaps the most important driving rule to remember is to keep your eyes on the road and your mind on your job.

LESSON III

WASHING AND LUBRICATING MOTOR VEHICLES

PART I - WASHING MOTOR

A truck to be properly lubricated and inspected must be clean; therefore, it is important that the truck be washed often. There are three separate operations in cleaning the truck; namely, washing motor, washing body and cab, and cleaning chassis.

Q. Why should the motor be cleaned?

A. A motor caked with dirt and grease has a tendency to heat, and the dirt also makes it hard to detect any broken or loose parts. It is difficult to work on a dirty, greasy motor.

Q. How should a motor be cleaned?

A. The most effective way to clean a motor is with steam, but as this method is not practical in CCC Camps, the next best method is to use a cleaning solvent. Never use gasoline--it creates a fire hazard and is harmful to the hands (when treated with lead). After all grease and dirt has been removed from the motor, wash it thoroughly with a hose. To start the motor after this operation, it may be necessary to blow all moisture from the distributor and spark plugs.

B - WASHING BODY AND CAB

Q. What is the proper method for cleaning the body and cab?

A. 1. The body and cab should first be hosed down to clean off all mud and dirt. Remove the floor mat and thoroughly clean the inside of the cab, being careful to remove mud from under the doors. While the floor mat is out, all corrosion should be removed from the battery terminals with a soda solution. The terminals should then be greased with cup grease. The battery should be checked to see that all connections and bolts are tight, and that the battery is filled to the proper level with distilled water. After the whole truck has been hosed down, including the chassis, the cab and fenders and other enameled parts should be washed with a sponge and chamois. Hose the underside of the fenders to remove all dry mud and grease. When mud is allowed to dry and build up under the fenders, it adds a great deal of weight to them and has a tendency to make them crack along the edge. The weight of mud also pulls the fenders loose from the anchorage bolts.

2. At regular intervals the cab, fenders, and other enameled parts should be polished or waxed, as this will preserve the original finish. By maintaining the general appearance of a truck, the driver will take more pride in his truck and give it the care he should.

C - CLEANING OF CHASSIS

Q. How should the chassis be cleaned?

A. All mud must be hosed from the axles, spring hangers, steering device, and transmission. After this has

been done, the excess grease should be removed from the chassis with solvent, then all parts should be washed with water to remove the dirt and grease loosened by the solvent.

NOTE

A good time to make a thorough inspection is when you are washing and greasing the equipment. As you service your truck, keep your eyes open for broken, worn, or loose parts. Any defects should be reported as soon as you have completed this operation.

PART II - LUBRICATION

The purpose of lubrication is to prevent any two pieces of metal that are working one against the other from touching. This is accomplished by having a film of oil between the two metals. Upon this film of oil depends entirely the life of the bearings, cylinder walls, pistons, and, in fact, all working parts of the car or truck.

It is an established fact that oil and grease are much cheaper than repairs. It is impossible to over-emphasize the importance of lubrication. There are several factors to be considered in the general lubrication of a motor vehicle. The correct grade of oil or grease is very important; therefore, each class should carefully study all available charts. It is not practical to list each grade of oil and grease for the different types of motors and equipment in this lesson. A list of all types and models of motor equipment in each camp should be made up, and the

